



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/228,710	01/11/1999	SIMON CHOULDJIAN	17789-000200	8207

7590 06/02/2005
STEPHEN Y PANG
TOWNSEND AND TOWNSEND AND CREW
TWO EMBARCADERO CENTER
8TH FLOOR
SAN FRANCISCO, CA 941113834

EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
----------	--------------

2644

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/228,710

Applicant(s)

CHOULDJIAN ET AL.

Examiner

Walter F. Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-11,15,17-20,22,23,25,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,9,17-19,22,25 and 27 is/are rejected.
- 7) ☒ Claim(s) 2,4,7,10,11,15,20,23 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08 February 2005 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 5, 6, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giacomelli et al. (US Patent 4,539,437) in view of Burgess (US Patent 3,940,572) and further in view of (Feiner 3,978,293).**

Claim 1 is limited to a *method for providing power within a telephone server coupled to a computer system via an interface bus, to a maximum number of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage.* Giacomelli discloses a program for a power control system for improving energy efficiency for telephone sets connected into a local telephone

Art Unit: 2644

communications system. See Abstract. The system depicted in figure 1 includes an AC/DC power supply (1000), a plurality of telephones (1001), telephone trunks (1023) and a computer (1010) connected to the network switch (i.e. *telephone server*) by an *interface bus* (1013). Notice, all telephones are individually connected to the server (1020) by separate lines (1007); i.e. *wherein none of the plurality of telephones are on a common line*. While the system of Giacomelli includes an involved method for reducing power consumption of the telephone sets (1001), there are no details concerning the construction of the power supply (1000). Therefore, Giacomelli anticipates all limitations of the claim with the exception of providing a *primary voltage* and a *secondary voltage*.

Burgess teaches a power supply for a key telephone system, which supports a plurality of telephones (not shown). See Abstract. The key telephone system power supply shown in figure 2 includes an input for AC voltage by way of line input (10), this voltage is divided by the transformer circuit shown. The voltage present at node A corresponds to the *primary voltage* and the voltage present at node B corresponds to the *secondary voltage*. As seen from figure 1, ringer voltage rated at 110VAC/30Hz is generated in response to the voltages presented at nodes A and B; i.e. *generating ringer power in response to the primary voltage, and a ringing signal in response to the ringer power and to the secondary voltage*. Talk battery voltage rated at -24VDC is generated in response to the voltage at node A; i.e. *generating direct inward dialing power in response to the primary voltage*. As neither Giacomelli nor Burgess distinguish between direct inward and internal call scenarios, it follows that the -24VDC talk voltage is used for both cases; i.e. *the direct inward dialing power configured to provide a first*

operational voltage for a plurality of telephones from the maximum number of telephones, when the plurality of telephones receive telephone calls directly from the telephone trunk.

It would have been obvious to one of ordinary skill in the art at the time to include the key telephone power supply as taught by Burgess with the key telephone system of Giacomelli simply because Giacomelli does not disclose the details of the power supply therein.

Clearly, the power supply of Burgess provides a constant AC voltage useful in ringing. However, neither Giacomelli nor Burgess teach scheduling or any other type of ring control scheme. Therefore, Giacomelli in view of Burgess makes obvious all limitations of the claim with the exception of *wherein a peak voltage of the ringing signal is provided to no more than approximately one half of the maximum number of telephones at a time.*

Feiner teaches a ringing control circuit with shared ringing loop current detector. See Abstract. As seen in figure 1 of Feiner, a shared ring generator (RG), such as the one taught by Burgess provides ringing power to a plurality of line circuits (LC1-LC128), which are organized into groups (LG1-LG4), where each group corresponds to the station set port card depicted in figure 1 of Giacomelli. The ringer circuit of Feiner allows a maximum of 16 telephones out of 128 to be rung over a course of four intervals. See column 5, line 64 through column 6, line 19. In any one phase, only four phones are rung, which is clearly no more than approximately one half of the maximum number of telephones (i.e. 16). In this manner, one ringer provides ringing voltage to four times as

many telephone circuits in one ringing cycle as a ringer using a conventional ringing control scheme without scheduling and overlap. This clearly reduces the ringer size and the overall cost and energy needs of the server.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the ringing scheduling scheme as taught by Feiner simply because neither Giacopelli nor Burgess teach how to control the ringer, and because the teachings of Feiner reduce the cost of the server.

Claim 5 is limited to *the method of claim 1*, as covered by Giacopelli in view of Burgess and further in view of Feiner. As is clearly seen from figure 2 of Feiner, the ringing cycle has four phases, each with a *duty cycle of 25%*. Therefore, Giacopelli in view of Burgess and further in view of Feiner makes obvious all limitations of the claim.

Claim 6 is limited to *the method of claim 5*, as covered by Giacopelli in view of Burgess and further in view of Feiner. As is clearly seen from figure 2 of Feiner, the ringing cycle has four phases, each with a duty cycle of 25%; i.e. *no more than a portion of the maximum number of telephones at a time, wherein the portion is one third, one half, one third*. Therefore, Giacopelli in view of Burgess and further in view of Feiner makes obvious all limitations of the claim.

Claim 9 is limited to *a telephone server coupled to a computer system via computer bus, configured to provide output power and signals to a plurality of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage*. The server of this claim is limited to components that are inherently required to implement the method of claim 1, including the *transformer* that

was shown in figure 2 of Burgess. Therefore, Giacomelli in view of Burgess and further in view of Feiner makes obvious all limitations of the claim.

Claim 17 is limited to the *telephone server of claim 9*, as covered by Giacomelli in view of Burgess and further in view of Feiner. The voltage regulator (17) seen in figure 2 of Burgess controls the DC voltage presented at the TALK terminal (19). In particular, the voltage regulator selectively controls the current flow through the PNP transistor (Q3) using an *enabling signal* generated at output port 2, which in turn regulates the – 24VDC (i.e. *first operational voltage*). See column 2, line 23, through column 3, line 21. Therefore, Giacomelli in view of Burgess and further in view of Feiner makes obvious all limitations of the claim.

2. **Claims 18, 19, 22, 25 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Giacomelli in view of Burgess in view of Feiner and further in view of Itoh et al. (US Patent 4,726,060).

Claim 18 is limited to a *method* that is essentially the same as the method recited in claim 1, as covered by Giacomelli in view of Burgess and further in view of Feiner. However, claim 18 also recites *receiving an enabling signal from the telecommunications interface from the computer system, and generating a ringing drive voltage...in response to the enabling signal*. Clearly, the ring generator of Burgess does not necessitate any type of *enabling signal*. It simply generates an AC ring signal from an input AC signal.

Itoh teaches a line circuit for driving a ringer and a service indicating lamp in a telephone set. See Abstract. In the background, Itoh teaches that the large voltage,

Art Unit: 2644

low-frequency ring signals require a large transformer, such as that taught by Burgess. See column 1, lines 49-62. In solution, Itoh suggests using a switching power supply, depicted in figure 2 as elements 21-23. See column 1, line 65, through column 2, line 44. The signal H OR I acts as an *enable signal* to generate ringing power in accordance with the 24V provided to the ring circuitry, or *first drive voltage*.

It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the transformer used in generating ringing voltage with the switching power supply as taught by Itoh for the purpose of reducing the overall size and weight of the telephone server's ringing circuit.

Claim 19 is limited to *the method of claim 18*, as covered by Giacomelli in view of Burgess in view of Feiner and further in view of Itoh. As none of the prior art references suggest using a different talk battery level for direct inward and internal calls, the *first operational drive voltage* must be used for all calls, including *directly dialed calls*. Therefore, Giacomelli in view of Burgess in view of Feiner and further in view of Itoh makes obvious all limitations of the claim.

Claim 22 is limited to *the method of claim 18*, as covered by Giacomelli in view of Burgess in view of Feiner and further in view of Itoh. As seen from figure 2 of Burgess, a voltage for message indication is provided at the LAMP 10VAC port. The LAMP voltage is supplied in response to receiving an AC input voltage from line input (10). Therefore, Giacomelli in view of Burgess in view of Feiner and further in view of Itoh makes obvious all limitations of the claim.

Claim 25 is limited to *the method of claim 18*, as covered by Giacopelli in view of Burgess in view of Feiner and further in view of Itoh. As shown in the rejections of claims 5 and 6, the ringing voltage is supplied to one-quarter of the *maximum number of telephones* using a 25% *duty cycle*. Therefore, Giacopelli in view of Burgess in view of Feiner and further in view of Itoh makes obvious all limitations of the claim.

Claim 27 is limited to *the method of claim 18*, as covered by Giacopelli in view of Burgess in view of Feiner and further in view of Itoh. As shown in the rejections of claims 5 and 6, the ringing voltage is supplied to one-quarter of the *maximum number of telephones* using a 25% *duty cycle*. Therefore, Giacopelli in view of Burgess in view of Feiner and further in view of Itoh makes obvious all limitations of the claim.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

3. **Claims 2, 4, 7, 10, 11, 15, 20, 23 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Claim 7 is limited to *the method of claim 1*, as covered by Giacopelli in view of Burgess and further in view of Feiner. As shown above in the rejection of claim 1, neither Giacopelli nor Burgess differentiate between direct inward and internal calls by generating a different operational voltage. As the system of Feiner is only concerned with ringer control, it follows that none of the above cited prior art teaches *generating second operational voltage in response to the primary voltage when the telephone*

Art Unit: 2644

receive telephone calls from other telephones from the maximum number of telephones; wherein the first operational voltage is approximately twice the second operational voltage. Thus, claim 7 is allowable over Giacopelli in view of Burgess and further in view of Feiner.

Claims 15 and 28 recite essentially the same subject matter as claim 7, and are allowable over Giacopelli in view of Burgess and further in view of Feiner for at least the same reasons.

Claim 2 is limited to *the method of claim 1*, as covered by Giacopelli in view of Burgess and further in view of Feiner. While the system of Burgess provides a 10VAC signal to indicate that a message is waiting for a user of a key telephone system, there is no indication in any of Giacopelli, Burgess or Feiner that the message waiting signal is to be applied to a limited number of telephones from the maximum number of telephones that can possibly be served by the message waiting indicator signal at any one time. Thus, claim 2 is allowable over Giacopelli in view of Burgess and further in view of Feiner.

Claim 4 is dependent on claim 2, and is allowable over Giacopelli in view of Burgess and further in view of Feiner for at least the same reasons.

Claims 10, 11 and 23 recite essentially the same subject matter as claim 2, and are allowable over Giacopelli in view of Burgess and further in view of Feiner for at least the same reasons.

Claim 20 is limited to *the method of claim 18*, as covered by Giacopelli in view of Burgess in view of Feiner and further in view of Itoh. None of the cited prior art

Art Unit: 2644

suggests using the same *enabling signal* to control generation of both the *ring* and *drive voltage*. Thus, claim 20 is allowable over Giacopelli in view of Burgess in view of Feiner and further in view of Itoh.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
5/31/05


SINH TRAN
SENIOR PATENT EXAMINER